Date: Thu, 24 Mar 94 04:30:36 PST
From: Ham-Homebrew Mailing List and Newsgroup <ham-homebrew@ucsd.edu>
Errors-To: Ham-Homebrew-Errors@UCSD.Edu
Reply-To: Ham-Homebrew@UCSD.Edu
Precedence: Bulk
Subject: Ham-Homebrew Digest V94 #71
To: Ham-Homebrew

Ham-Homebrew Digest Thu, 24 Mar 94 Volume 94 : Issue 71

Today's Topics:

Send Replies or notes for publication to: <Ham-Homebrew@UCSD.Edu>
Send subscription requests to: <Ham-Homebrew-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Homebrew Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/ham-homebrew".

Date: Tue, 22 Mar 94 21:34:00 -0400
From: ihnp4.ucsd.edu!swrinde!emory!news-feed-2.peachnet.edu!concert!
hearst.acc.Virginia.EDU!pplace!ed.lang@network.ucsd.edu
Subject: Help with trap dipole
To: ham-homebrew@ucsd.edu

I would like to build a trap dipole for 160M, 75M, 40M. Can you help me
with the traps? Maybe suggest a construction article you have seen.

Thanks

 ¿ SLMR 2.1a ¿ KC4YLX DX-CLUSTER & WA4TFZ PBBS ed.lang@pplace.com

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Date: Wed, 23 Mar 1994 15:40:29 GMT
From: yale.edu!noc.near.net!das-news.harvard.edu!cantaloupe.srv.cs.cmu.edu!
dolphin!ed@yale.arpa
Subject: Info wanted: ICOM IC2A 2m HT
To: ham-homebrew@ucsd.edu

I recently Purchased an ICOM IC2A 2meter Handi Talkey at a hamfest.
The orig synthesized HT with the thumbwheels on top for freq selection.
I Have heard that these were built like tanks, very rugged and easily fixable
if they break.

I am interested in general info: Output power, current drain, details of
external speaker & mike jacks, Schematic / service manual, power requirements,
do's & dont's to do with the rig...

The unit has a 120v base charger for nicad packs.
I got 1 small Nicad pack that works in the base charger and has
a coaxial plug at the top of it to accept vehicle power to power radio
& recharge nicads (I have tried this)

I got 2 extra battery packs for nicads/alkaline AA batts but they will only
charge in the base charger. They have no provision for external power to
charge / override the batts. Is there a circuit that can replace the batts
and provide external power directly to the rig.

Will this unit work better at 12.5v than it does at 8.5v? Will it smoke at
13.8v?

Any and all info would be appreciated.

     Thanks.

     Ed Bathgate

     Send replys to Ed@fore.com

Date: 23 Mar 1994 20:02:50 -0500
From: ihnp4.ucsd.edu!galaxy.ucr.edu!library.ucla.edu!europa.eng.gtefsd.com!
news.umbc.edu!eff!news.kei.com!ddsw1!panix!not-for-mail@network.ucsd.edu
Subject: Kenwood (TS-850) Computer Interface Info Wanted
To: ham-homebrew@ucsd.edu

  A friend is interested in getting details about the computer
interface "box" used with the Kenwood TS-850. Has anybody built one
for themselves (rather than buying Kenwood's)? Does anybody have
schematics? I'm sure that recommendations of commercially available

software and other hints and kinks would be appreciated as well.
Email to me (adam@panix.com) and I'll forward your replies.

 -Thanx
  -Adam (N2DHH)

Date: 23 Mar 94 21:14:19 GMT
From: news-mail-gateway@ucsd.edu
Subject: list
To: ham-homebrew@ucsd.edu

subscribe Evert Halbach

Date: 22 Mar 94 17:12:01 GMT
From: agate!howland.reston.ans.net!cs.utexas.edu!geraldo.cc.utexas.edu!
portal.austin.ibm.com!awdprime.austin.ibm.com!mike@ucbvax.berkeley.edu
Subject: Parts sources and where to find HF coils/coil forms
To: ham-homebrew@ucsd.edu

Hi all
I think that the subject says it all.....anybody put together a good
list of parts/surplus sources (w/ phone nums)? Also I am looking
for a source for HF coils (air wound) and coil forms. I've called
Barker & Williamson and they do sell them but I'm afraid that they
will cost mega$$$. They are sending me a catalog. Any ideas?

Thanks
Mike Condon   WB9MMR   "...more music radio..."   Austin, TX
--
==
Mike Condon   8-8245   mike@d7310   CONDON@AUSVM6   WB9MMR

Date: 23 Mar 1994 15:20:27 GMT
From: ihnp4.ucsd.edu!usc!cs.utexas.edu!math.ohio-state.edu!news.acns.nwu.edu!
casbah.acns.nwu.edu!rdewan@network.ucsd.edu
Subject: QSK
To: ham-homebrew@ucsd.edu

In article <9403221804.aa02374@COR5.PICA.ARMY.MIL>,
 <Waltk@pica.army.mil> wrote:
>
>P.S. If you are interested I know of a source for RJ1A relays at a reasonable

>cost. Email me directly and I'll give you the poop.
>

Last year at Dayton I bought a bunch for $22 each. The guy who sells it
is a Dayton regular. I do not have his card, but he has an unmatched selection
of tubes, sockets, chimneys, doorknobs, relays, fiberglass parts etc.
Although, I do not have his name/call with me, you will know you have reached
the right person when you see his flea market stand.

CU in Dayton.

Regards,

Rajiv
aa9ch
r-dewan@nwu.edu

Date: Wed, 23 Mar 1994 15:16:25 GMT
From: ihnp4.ucsd.edu!dog.ee.lbl.gov!agate!howland.reston.ans.net!math.ohio-
state.edu!cyber2.cyberstore.ca!nwnexus!jhgrud!eskimo!wrt@network.ucsd.edu
Subject: QSK
To: ham-homebrew@ucsd.edu

In article <9403221804.aa02374@cor5.pica.army.mil>,
 <Waltk@pica.army.mil> wrote:
>
>>Hi all, I hv a Heath SB1000 (Ameritron AL80A), that I wud like to add
QSK to.
>>ALl the QSK kits are a bit expensive for my taste, but I was
wondering. Is it
>>just the speed of the internal relay that keeps this thing from being
QSK?
>>Afterre
>>ading Richard Measure's (SP?) article in QST, if I just replace the
internal
>>relay with a high speed vacum relay (Jennings) will I be able to run
it in QSK
>>or are there other restraints. Tnks for any help you can give.
>>
>>DE KA3PLS
>
>You are referring to the article by Rick Measures, AG6K, in January
1994 QST,
>titled "The Nearly Perfect Amplifier."
>
>I just finished implementing Measure's QSK, electronic bias switching,

and
>variable bias voltage circuits into my home brew amplifier. The results
are
>outstanding. It was relatively easy to do, it can be outboarded to an
existing
>amp, as mine is, and it works flawlessly. This guy sure knows his
amplifiers!
>
>I built the unit using his exact values for the timing circuits and was
amazed
>at the results - quiet and smooth operation and absolutely NO hot
switching.
>I tested the unit using a multiple channel, 4 trace, scope. I used the
key
>closure as the primary trigger and viewed the timing of the exciter and
output
>relays. Here are the results.
>
>I found that with his *optional* make delay circuit, 1k-ohm resistor &
1ufd cap
>across the exciter reed relay (Kenwood replacement) closed about 0.8 ms

>(800 usecs.) after the RJ1A Vacuum relay did. When going from transmit
to
>receive the vacuum relay stayed closed for about 1.2ms (1200 usecs)
after the
>exciter relay opened.
>
>The one thing I did differently was, to use a readily available 42VDC
power source
>for the relays instead of the 80-120VDC source he calls for. The use
of a
>higher than normal relay voltage (with current limiting) is a common
relay
>"speed-up" technique. Instead of seeing 80ma of current being drawn by
the
>relays upon closure I see somewhere around 70ma - no big whoop.
>
>As for the opto-electronic bias switching, it too is smooth and on the
air
>reports confirm that it sounds very clean, unlike common commercial EBS
circuits.
>
>The bias voltage selection is done with an 11 position switch which I
found in the
>proverbial junk box. Instead of using silicon diodes, as called for in
the
>article, I had a bunch of 3.3V, 5 watt, zeners I put into service. I

have 12 in
>series which provides about 40V of bias at the maximum voltage I run on
my
>amplifier. The tubes are 4-400s (3 in GG) and with 4KV resting voltage
on the
>plates the idling current is about 80 ma. When I run the amp at
reduced power
>and drop the operating voltage to 2.5KV, I can readily adjust the
idling current
>back to a nominal 80-100 ma. by adjusting the bias switch.
>
>All in all, Mr. Measure's recommendations and earlier articles have
been of
>great value and inspiration to me in my amp building projects.
>
>   73 & Happy building,
>
>   Walt Kornienko - K2WK
>   waltk@pica.army.mil
>
>P.S. If you are interested I know of a source for RJ1A relays at a
reasonable
>cost. Email me directly and I'll give you the poop.
>

Excellent advice from Walt... I also have an SB-1000 (non-QSK)
and would like to dispel the rumor that you can't use a
non-QSK amp on Amtor or Pactor. I've been using it for over a
year with perfect results. Granted, the relay klunking takes
some getting used to. Almost had heart failure the first time
I used it, but it survived and so did I. The SB-1000 leaves the
HV on all the time, so you're only switching the bias on and off,
and the antenna, of course. CW is a different matter. There you
do need real QSK.

73 es gl
Bill Turner, W7LZP
wrt@eskimo.com

Date: 22 Mar 94 20:50:06 GMT
From: agate!etch-eshop.Berkeley.EDU!ron@ucbvax.berkeley.edu
Subject: What is third order intercept ?
To: ham-homebrew@ucsd.edu

 Hi,

I keep hearing the term " third order intercept " when speaking
of frontend intermod problems.

I assume that it has something to do with how the input is biased,
be it a FET or GAsFet or whatever.

Would some kind sole care to explain this ?

thanks and 73's

Ron Viegelahn

ron@etcheshop.Berkeley.EDU

8 weeks and still waiting 8-(

Date: Wed, 23 Mar 1994 14:49:36 GMT
From: ihnp4.ucsd.edu!pacbell.com!sgiblab!wetware!spunky.RedBrick.COM!psinntp!
psinntp!arrl.org!zlau@network.ucsd.edu
Subject: What is third order intercept ?
To: ham-homebrew@ucsd.edu

Ronald Viegelahn (ron@etch-eshop.Berkeley.EDU) wrote:

: Hi,

: I keep hearing the term " third order intercept " when speaking
: of frontend intermod problems.

Real amplifiers produce distortion products. The easiest to measure
in the frequency domain are those at the frequencies 2f1-f2 or 2f2-f1.
(though 2nd order products are sometimes easier if there
aren't filters to complicate the measurement)
By linearly extrapolating the line relating the level of distortion
with the input signals, one can find the point where this line
intercepts the level of the desired outputs.

Basically, the higher the input intercept, the higher the level of
signals needed to cause problems. But, this fails to factor in
the sensitivity of the receiver--what good is a crunch proof receiver
that is deaf? Dynamic range attempts to factor this in, though it
neglects the actual enviroment the receiver is subjected to.

: I assume that it has something to do with how the input is biased,
: be it a FET or GAsFet or whatever.

Device biasing does play a part--in general, the higher the biasing
for a given device type the higher the intercept. Thus, the input
stage of a high dynamic range receiver sometimes uses more power than
the entire receiver of a handheld transceiver. There are also design
techniques, such as lossless feedback techniques and combining devices
which will improve the input intercept.

--
Zack Lau KH6CP/1 2 way QRP WAS
8 States on 10 GHz
Internet: zlau@arrl.org 10 grids on 2304 MHz

End of Ham-Homebrew Digest V94 #71
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